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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,522	07/16/2003	Hisayuki Hirai	240470US0	7469
22850	7590	08/25/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MAYO III, WILLIAM H	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,522

Applicant(s)

HIRAI ET AL.

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/23/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in present Application No. 10/619,522, filed on July 16, 2003.

Information Disclosure Statement

2. The information disclosure statement filed October 15, 2003 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

Drawings

3. The drawings are objected to because Figures 1-2 lacks the proper cross-hatching which indicates the type of materials, which may be in an invention. Specifically, the cross hatching to indicate the insulation materials is improper. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because throughout the abstract, the term "comprises" is stated, which is improper claim language for the abstract.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-2 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrus et al (Pat Num 6,740,396, herein referred to as Carrus) in view of Inoue (JP Pat Num 10-237237). Carrus discloses an enameled wire (Figs 1-2) for transmission or distribution of power that possesses high mechanical, thermal, electrical, and barrier properties and fire resistant (Col 1, lines 17-22) comprising an electrical conductive wire (2) and a first coating layer (3) provided on the electrical conductive wire (2), a second coating layer (4) formed on the first coating layer (3), wherein the second coating layer (4) may be formed of polyamide imide resin mixed with inorganic filler material (Cols 4-5, lines 5-67 & 1-14, respectively) uniformly dispersed in the high molecular compound (Col 8, lines 35-40, which states that either layer 3 & 4 may comprise the composite layers). With respect to claim 2, Carrus discloses that the inorganic filler may be clay (Col 2, lines 7-8). With respect to claim 4, Carrus discloses the clay compound may be smectite (Col 2, lines 7-8). With respect to claim 5, Carrus discloses that metalcation between the adjacent layers of the clay compound is substituted by quaternary ammonium salt (Col 2, lines 10-12). With respect to claim 6, Carrus discloses that the high molecular compound may be Polyvinyl Formal (PVC, Col 4, lines 5-8) and Polyester (Col 4, lines 50-55). With respect to claim 7, Carrus discloses an enameled wire (Fig 1) comprising an electrical conductive wire (2), a first coating layer (3) surrounding the electrical conductive wire (2), wherein the first coating layer (3) may be high molecular compound, such as polyester imide resin (Col 4, lines 50-55) and

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inorganic particles (i.e. clay) dispersed in the high molecular compound and a second coating (4) of polyamide imide (Col 2, lines 1-2) surrounding the first coating layer (4). With respect to claim 8, Carrus discloses that the second coating layer (4) may be made of polyamide imide (Col 2, lines 1-2) having filler material (i.e. clay) embedded (Col 8, lines 35-40). With respect to claim 9, Carrus discloses an enameled wire (Fig 1) comprising an electrical conductive wire (2), a first coating layer (3) surrounding the electrical conductive wire (2), and a second coating (4) of polyamide imide (Col 2, lines 1-2) surrounding the first coating layer (4), wherein the second coating layer (3) may be high molecular compound, such as polyester imide resin (Col 4, lines 50-55) and inorganic particles (i.e. clay) dispersed in the high molecular compound. With respect to claim 10, Carrus discloses that the inorganic filler is mixed at a ratio of 0.5-15 weight parts to 100 weight parts of high molecular compound (i.e. 1-40 phr, Col 6, lines 52-54).

However, Carrus doesn't necessarily disclose the inorganic materials being flat particles (claims 1, 7, 9, and 10), nor the particle size being 1 μ m or less (claim 10)

Ionue teaches a flame resistant composition for coating electrical wires or cables that exhibits excellent mechanical characteristics, flame retardancy, and extrusion processibility (Abstract). Specifically, with respect to claims 1, 7, 9, and 10, Ionue teaches a composition for usage with an electrical wire, wherein the composition comprises a high molecular compound (ethylene and 2-10 α -olefins) comprising an inorganic filler compound (magnesium hydroxide or clay), which is flat and has a mean particle diameter of 2-6 μ m (abstract).

With respect to claims 1, 7, 9, and 10, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the enameled wire of Carrus to comprise the inorganic filler material to contain flat particles as taught by Inoue because Inoue teaches that such a configuration is commonly utilized for coating electrical wires or cables and exhibits excellent mechanical characteristics, flame retardancy, and extrusion processability (Abstract) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

With respect to claim 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the average particle size of modified Carrus to comprise the a particle size of less than 1 μ m, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Bergman et al (Pat Num 5,459,286), Sano et al (Pat Num 4,716,079), Suzuki et al (Pat Num 6,534,717), Hayami (Pat Num 5,470,657), Yin et al (Pat Num 6,060,162), Sattler (Pat Num 4,496,715), Miyake et al (Pat Num

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4,508,779), Saunders (Pat Num 3,856,566), and Imai et al (Pat Num 4,476,192), all of which disclose enameled wires.

Communication

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III